Implementation of an IPPC Information System in the Slovak Republic

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Abstract

Slovak Environmental Agency (SEA) is a governmental organization of the Slovak Ministry of Environment that is responsible for administration of the Environmental Information System of the Slovak Republic. Main goal of the Information system is to share environmental information between public administrations, governmental organizations, citizens, scientific institutions etc. The SEA is also responsible for a development and implementation of an information system supporting the Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control (IPPC).

1. Introduction

The development and implementation of an IPPC information system are carried out at the Slovak Environmental Agency in Banská Bystrica in the framework of a Twinning Project SK02/IB/en/01 with Greece in co-operation with MoE², SEI³ and SHMI⁴ as a precondition to fulfil the requirements of the IPPC – Directive 96/61/EC and also a Slovak Law on IPPC: Act No. 245/2003 Coll. on IPPC. In-depth analysis of existing environmental information systems, data flows and links were completed comparing the present situation in the Slovak Republic with the requirements of the European and the Slovak Law on IPPC. The IPPC Information system will be developed as a comprehensive system focused on collecting of all information needed, processing and presentation of the information for support of all institutions under the Ministry of Environment (MoE) that participate on the IPPC process. The goal is to improve data flows between institutions through the establishment of the information system to share relevant data. It will also create conditions for information obligations of the Slovak Republic on the international level.

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2. Realisation

2.1 Content structure
The content structure is very complex and can not be presented adequately within this article. The IPPC information system in Slovakia will consist of five linked registers:
- Document register
- Emission register
- BAT\textsuperscript{5} and BREF\textsuperscript{6} register
- Register of authorized persons
- Register of quality standards of environment

2.2 Software Concept
Document register was developed as a first step of building of the IPPC information System. According to legislative conditions, content requirements and our experiences of building of information systems, it was agreed to build Document register as a thin client application based on the three-tier architecture: user tier – middle tier – back-end server. The thin client application is a web application with web browser interface (Internet Explorer browser). A client connects IIS server where the middle tier is located – an ISAPI application server. This application was designed as ISAPI Web Server application. It has been created by IntraWeb technology. IntraWeb\textsuperscript{7} is a component-based Web development framework written in Delphi\textsuperscript{TM} by AtoZed\textsuperscript{7} Software. This framework enables us to support large group of IPPC users over more varied network configurations (number of concurrent users more than 30+). This technology combines the visual development, normally associated with DELPHI RAD tool with a robust collection of dynamic Web site creation features. The main advantage of using this technology is very fast development of a robust WEB application. The data exchange runs via HTTPS connection. The database tier is presented by Oracle\textsuperscript{9i} database. As we needed to support the permit procedure at SEI from the date of our accession to the European Union, the fastest solution to build Document register was necessary. IntraWeb technology was the relatively fastest solution. The same technology will be used to develop all registers.

\textsuperscript{5} Best Available Technique
\textsuperscript{6} BAT Reference Documents
\textsuperscript{7} http://www.atozed.com
3. Future prospects and guaranteed goals

- Building of the databases for collecting and processing relevant data in IPPC process for categories of industrial activities
- Development of National Monitoring Emission Register of pollutants according to the Slovak Law
- Software development for processing of relevant data for reporting obligations of the Slovak Republic towards EU and other European organisations
- Establishment of a Mobile Laboratory for the SEA
- Development of the IPPC Information system and its implementation
- Creation of a www page for IPPC process
- Establishment of the National Training Centre, providing trainings for subjects which participate on IPPC process
- Final conference, concerning data exchange and sharing of knowledge and results acquired during the project realisation.